

Commonwealth of Kentucky
Division for Air Quality
STATEMENT OF BASIS / SUMMARY

Conditional Major, Construction/Operating

Permit: F-21-050

Dana Light Axle Manufacturing, LLC

10000 Business Blvd.

Dry Ridge, KY 41035

May 5, 2021

Ibrahim AL-Burai, Reviewer

SOURCE ID: 21-081-00019

AGENCY INTEREST: 4255

ACTIVITY: APE20200001

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SECTION 1 – SOURCE DESCRIPTION

SIC Code and description: 3714, Motor Vehicle Parts and Accessories

Single Source Det. ☐ Yes ☒ No If Yes, Affiliated Source AI:

Source-wide Limit ☒ Yes ☐ No If Yes, See Section 4, Table A

28 Source Category ☐ Yes ☒ No If Yes, Category:

County: Grant

Nonattainment Area ☒ N/A ☐ PM₁₀ ☐ PM_{2.5} ☐ CO ☐ NO_x ☐ SO₂ ☐ Ozone ☐ Lead

If yes, list Classification:

PTE* greater than 100 tpy for any criteria air pollutant ☒ Yes ☐ No

If yes, for what pollutant(s)?

☐ PM₁₀ ☐ PM_{2.5} ☐ CO ☐ NO_x ☐ SO₂ ☒ VOC

PTE* greater than 250 tpy for any criteria air pollutant ☒ Yes ☐ No

If yes, for what pollutant(s)?

☐ PM₁₀ ☐ PM_{2.5} ☐ CO ☐ NO_x ☐ SO₂ ☒ VOC

PTE* greater than 10 tpy for any single hazardous air pollutant (HAP) ☒ Yes ☐ No

If yes, list which pollutant(s): Ethyl Benzene

PTE* greater than 25 tpy for combined HAP ☒ Yes ☐ No

*PTE does not include self-imposed emission limitations.

Description of Facility:

Dana Light Axle Manufacturing, LLC manufactures light vehicle axles used in vans, trucks and sport utility vehicles. The operations include welding and coating.

SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: F-21-050

Activities: APE20200001

Received: November 5, 2020

Application Complete Date(s): December 28, 2020

Permit Action: ☐ Initial ☒ Renewal ☐ Significant Rev ☐ Minor Rev ☐ Administrative

Construction/Modification Requested? ☒ Yes ☐ No

Previous 502(b)(10) or Off-Permit Changes incorporated with this permit action ☒ Yes ☐ No
APE20190001: decommissioned EU-01 and replacing EU-08 spray booth with a new one.

Description of Action:

Renewal permit with construction. Facility requested:

- Add a new touch-up paint booth (EU 55 Line 200 Manual Touch-Up Booth).
- Add a laser etcher (Line 700 Laser Etcher (36 parts/hr)).
- Increase the welding capacity.
- Change in coating and removal of the bottleneck analysis.
- Additional limit of 90 tons per year for particulate matter.
- Revert back to the 90 tons per year VOC limit.
- Removal of EP 6- Line 950 Manual Spray Booth (EU-36)

F-21-050 Emission Summary				
Pollutant	2019 Actual (tpy)	Previous PTE F-15-050 (tpy)	Change (tpy)	Revised PTE F-21-050 (tpy)
CO	0.46	0.00	0.00	0.00
NO _x	0.55	0.00	0.00	0.00
PT	0.55	10.56	- 10.44	0.28
PM ₁₀	0.55	10.56	- 10.44	0.28
PM _{2.5}	0.34	0.00	0.09	0.22
SO ₂	0.003	0.00	0.00	0.00
VOC	5.59	239.31	- 31.89	207.42
Lead	0	0	0	0
Greenhouse Gases (GHGs)				
Carbon Dioxide	659.95	0	- 659.95	0.00
Methane	0.01	0	- 0.01	0.00
Nitrous Oxide	0.01	0	- 0.01	0.00
CO ₂ Equivalent (CO ₂ e)	663.18	0	- 663.18	0.00
Hazardous Air Pollutants (HAPs)				
Ethyl Benzene	0.15	0.92	15.46	16.380
Cobalt (and Compounds)	0.00	0.00	0.001	0.001
Methyl Isobutyl Ketone	0.193	0.09	1.364	1.454
Xylenes (Total)	0.354	5.13	65.194	70.324
Combined HAPs:	0.697	6.14	123.90	88.709

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Emission Unit #3, 9, 10, 11 and 39 Surface Coating Operations				
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
VOC	90 tpy of VOC emissions	401 KAR 52:030	SDS/ Mass Balance	Recordkeeping, 12 month rolling total
HAP	Source wide 9/22.5 tpy single/combined	401 KAR 52:030	Material Balance & SDS	Recordkeeping, 12 month rolling total
PM/PM ₁₀	Source wide 90 tpy	401 KAR 52:030	Material Balance & SDS with 86% Transfer Efficiency	Recordkeeping, 12 month rolling total
PM	2.34 lbs/hr	401 KAR 59:010, Section 3(2)	SDS/ Mass Balance with 86% Transfer Efficiency	2 stage filter, 99.75% C.E., Manufacturer's guarantee
Opacity	20% opacity	401 KAR 59:010, Section 3(1)	N/A	Weekly Visual Observation
<p>Initial Construction and/or Modification Date: See below</p> <p>Process Description:</p> <p>EP 3 Line 300 Manual Spray Booth (EU-08) Spray operation system : Air-assisted airless spray gun (1) Coating usage rate: 9.35 gals/ hr Clean- up solvent usage rate: 0.20 gal/ hr Control Equipment: 2 stage filter Date of Commenced: June, 2019</p> <p>EP 9 Touch-up Spray Cans (EU-45) Coating usage rate: 0.19 gals/ hr Estimated transfer efficiency: 85% Date of Commenced: April, 1998</p> <p>EP 10 Spray Adhesive Cans (EU-46) Material usage rate: 0.12 gal/ hr Estimated transfer efficiency: 85% Date of Commenced: April, 1998</p> <p>EP 11 Spray Varnish Remover (EU-47) Material usage rate: 0.26 gal/ hr Date of Commenced: April, 1998</p> <p>EP 39 Line 200 Manual Touch-up Booth (EU-55) Spray operation system : Air-assisted airless spray gun (1)</p>				

Emission Unit #3, 9, 10, 11 and 39 Surface Coating Operations

Coating usage rate: 9.35 gals/ hr
Clean- up solvent usage rate: 0.20 gal/ hr
Control Equipment: 2 stage filter
Date of Commenced: April, 2021

Applicable Regulation:

401 KAR 59:010, This regulation is applicable to each affected facility, associated with a process operation, which is not subject to another emission standard with respect to particulates, commenced on or after July 2, 1975.

401 KAR 63:020, *Potentially Hazardous Matter or Toxic Substances*, applicable to each affected facility which emits or may emit potentially hazardous matter or toxic substances.

Precluded Regulations:

401 KAR 52:020, Title V Permits, is precluded since the annual source-wide VOC emission limit of 90 tons per year, single HAP emission limit of 9 tons per year, and 22.5 tons per year of combined HAPs for each twelve (12) consecutive months.

401 KAR 63:002, Section 2(4), (rrr) 40 C.F.R. 63.3880 to 63.3981, Tables 1 to 4, and Appendix A (Subpart MMMM), National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products., is precluded since facility has requested limitations on HAP emissions below a major source threshold.

401 KAR 59:225, New Miscellaneous Metal Parts and Products Surface Coating Operations, is precluded since the facility has taken a limit on volatile organic compounds (401 KAR 59:225 Section 2(1)(b)).

Comments:

- **401 KAR 63:002, Section 2(4)**((iiii) 40 C.F.R. 63.11169 to 63.11180, Table 1 (Subpart HHHHHH), National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, is not applicable because the spray coatings do not contain chromium, lead, manganese, nickel or cadmium, collectively referred to as target HAPs (40 CFR Section 63.11170(a)(3)).
- **401 KAR 63:002, Section 2(4)**(vvvvv) 40 C.F.R. 63.11514 to 63.11523, Tables 1 to 2 (Subpart XXXXXX), National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories is not applicable because the source is not in one of the nine metal fabrication and finishing source categories.
- **EP 6**: Line 950 Manual Spray Booth (EU-36) has been removed.
- **EP 14, 15 and 16** have been removed from the site.
- **MAU BMR-233-HTL** (6 MMBtu/hr) x4, are space heaters and they are direct heat exchangers.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Testing Requirements/Results

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
NA										

Footnotes:

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS

Table A - Group Requirements:

Emission and Operating Limit	Regulation	Emission Unit
90 tpy of VOC emissions	401 KAR 52:030	Source-wide
90 tpy of PM/PM10 emissions	401 KAR 52:030	Source-wide
9.0 tpy of individual HAP emissions	To preclude major source status for HAP	Source-wide
22.5 tpy of combined HAP emissions	To preclude major source status for HAP	Source-wide

Table B - Summary of Applicable Regulations:

Applicable Regulations	Emission Unit
401 KAR 59:010, New process operations.	EU3,9,10 & 39
401 KAR 63:020, <i>Potentially hazardous matter or toxic substances</i>	EU3,9,10,11 & 39

Table C - Summary of Precluded Regulations:

Precluded Regulations	Emission Unit
401 KAR 52:020 , Title V Permits.	Source-wide
401 KAR 63:002, Section 2(4) , (rrr) 40 C.F.R. 63.3880 to 63.3981, Tables 1 to 4, and Appendix A (Subpart MMMM), National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products.	Source-wide
401 KAR 59:225 , New Miscellaneous Metal Parts and Products Surface Coating Operations.	Source-wide

Table D - Summary of Non Applicable Regulations:

Non Applicable Regulations	Emission Unit
N/A	

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS (CONTINUED)

Air Toxic Analysis

401 KAR 63:020, *Potentially Hazardous Matter or Toxic Substances*

The Division for Air Quality (Division) has performed SCREEN View on January 28, 2021 of potentially hazardous matter or toxic substances (Xylene, Methyl Isobutyl Ketone, Methyl Chloride, 1,1,1-Trichloroethane, Ethyl Benzene, Methanol, Hexane, Tetrachloroethylene (PCE) and Cobalt) that may be emitted by the facility based upon the process rates, material formulations, stack heights and other pertinent information provided by the applicant. Additional refined model AERMOD was performed on April 28, 2021 on Cobalt Compounds & Ethyl Benzene pollutants. Based upon this information, the Division has determined that the conditions outlined in this permit will assure compliance with the requirements of 401 KAR 63:020.

Single Source Determination

N/A

SECTION 5 – PERMITTING HISTORY

Permit	Permit type	Activity#	Complete Date	Issuance Date	Summary of Action	PSD/Syn Minor
F-06-012	Initial	APE20060001	2/16/06	5/12/2006	Initial Construction Permit	N/A
F-06-012 R1	Revision	APE20070001	6/14/07	8/17/2007	Minor Revision, Construction/Operating	N/A
F-06-012 R2	Revision	APE20070002	11/7/ 07	11/20/ 07	Minor Revision	N/A
F-06-012 R3	Revision	APE20080001	3/7/ 08	3/17/ 08	Minor Revision/Name Change	N/A
F-06-012 R4	Revision	APE20080002	12/7/ 08	2/16/09	Update Emissions Units	N/A
F-06-012 R5	Revision	APE20100001	6/23/10	7/14/10	Update Emissions Units	N/A
F-11-001	Renewal	APE20100002	12/29/2010	6/21/11	Renewal Permit	N/A
F-11-001 R1	Revision	APE20130001	8/22/2013	10/1/2013	Addition of line GM31xxN	N/A
F-11-001 R2	Revision	APE20130003	10/07/2013	11/03/13	Increased VOC emission limit to 98 tpy	N/A
F-15-050	Renewal	APE20150001	1/8/2016	5/5/2016	Renewal Permit	N/A

SECTION 6 – PERMIT APPLICATION HISTORY

N/A

ABBREVIATIONS AND ACRONYMS

AAQS	– Ambient Air Quality Standards
BACT	– Best Available Control Technology
Btu	– British thermal unit
CAM	– Compliance Assurance Monitoring
CO	– Carbon Monoxide
Division	– Kentucky Division for Air Quality
ESP	– Electrostatic Precipitator
GHG	– Greenhouse Gas
HAP	– Hazardous Air Pollutant
HF	– Hydrogen Fluoride (Gaseous)
MSDS	– Material Safety Data Sheets
mmHg	– Millimeter of mercury column height
NAAQS	– National Ambient Air Quality Standards
NESHAP	– National Emissions Standards for Hazardous Air Pollutants
NO _x	– Nitrogen Oxides
NSR	– New Source Review
PM	– Particulate Matter
PM ₁₀	– Particulate Matter equal to or smaller than 10 micrometers
PM _{2.5}	– Particulate Matter equal to or smaller than 2.5 micrometers
PSD	– Prevention of Significant Deterioration
PTE	– Potential to Emit
SO ₂	– Sulfur Dioxide
TF	– Total Fluoride (Particulate & Gaseous)
VOC	– Volatile Organic Compounds